

**IN THE CLAIMS:**

Please cancel claims 1-29 without prejudice as follows:

1-29. (Canceled)

30. (Original) A method of controlling the rate of change of a patient's body temperature using a heat transfer catheter and associated controller, comprising:

- providing a heat transfer catheter for insertion into a body cavity, the heat transfer catheter having a heat transfer region thereon;
- sensing the patient's body temperature in the body cavity or in another location;
- determining the temperature of the catheter heat transfer region;
- providing a controller in communication with the heat transfer catheter via conduits, the controller being adapted to elevate or depress the temperature of the catheter heat transfer region relative to the body temperature;
- selecting a target temperature different than the body temperature;
- selecting a ramp rate equal to the time rate of change of temperature from the body temperature to the target temperature;
- setting the temperature of the catheter heat transfer region based on the ramp rate;
- monitoring the temperature differential between the target temperature and the body temperature; and
- reducing the ramp rate when the temperature differential reduces below a predetermined threshold.

31. (Original) The method of claim 30, wherein the heat transfer catheter and conduits define a fluid circulation path therethrough, and wherein the step of setting the temperature of the catheter heat transfer region comprises setting the temperature of a circulating fluid within the fluid circulation path.
32. (Original) The method of claim 31, wherein the step of determining the temperature of the catheter heat transfer region comprises sensing the temperature of the circulating fluid.
33. (Original) The method of claim 32, further including comparing the target temperature and the temperature of the circulating fluid and using the comparison to adjust the temperature of the circulating fluid.
34. (Original) The method of claim 30, wherein the controller includes a microprocessor, and wherein the steps of monitoring and reducing are accomplished automatically by the microprocessor.
35. (Original) The method of claim 30, wherein steps of sensing, determining, and monitoring are accomplished at rates of multiple times a second.
36. (Original) The method of claim 30, further including:  
providing operator inputs for the controller to enable manual adjustment of the target temperature and the ramp rate.